



ECONOMY II. IN THE PRE- ACHAEMENID PERIOD

ECONOMY

ii. IN THE PRE-ACHAEMENID PERIOD

Pre-Median Persia was a crucial economic component of ancient southwest Asia from the earliest times (Voigt and Dyson; Dyson, 1987; Voigt, 1987; E. Henrickson, 1989). Throughout its prehistory and early history, interregional diversity of economic scale and complexity characterized Persia. Gross topography, [climate](#), [ecology](#), and natural resources formed a regionally diverse mosaic of subsistence and economic potentials, ultimately reflected in cultural regions. The ridges of the Zagros mountains in western Persia and the central deserts (see [DESERT](#)) have always constrained routes for interregional movement both within Persia and to adjacent regions. East-west routes through the Zagros are particularly limited; the best route, the “Silk Road” or “Khorasan Road,” runs from Hamadān through Kangāvar and Kermānšāh to Sar-e Pol-e Zohāb to Baghdad (Levine, 1972, 1973; Great Britain; Goff Meade, 1968; Goff, 1966, 1971; Rabino, 1903). Caravan routes and caravanserais define the basic pre-modern transportation networks (Kleiss). The Persian highlands and plateau have provided, directly or by transit trade, many of the raw materials lacking in the Mesopotamian lowlands (Potts; Herrmann; Berthoud et al.; Larsen; Carter, 1990).



Archaeological data, from artifacts to architecture to regional settlement patterns, are the primary source for reconstruction of the pre-Median economy of Persia (Hole, 1987; Voigt and Dyson, 1992; Dyson, 1987; Voigt, 1987); animal bones, carbonized seeds, and charcoal provide information on diet and environment (Zeder; Hesse; Wright, Miller, and Redding, 1980; Meadow; Bökönyi; Gilbert, 1979; Gilbert and Steinfeld; Miller, 1981a-b, 1982; Woosley; Woosley and Hole; Harris). Similarities between distributions of archaeological assemblages and ethnographic tribal regions suggest interpretive socioeconomic paradigms (Goff Meade, 1968; Goff, 1971; Edmonds; Rabino, 1903, 1916, 1920; Minorsky). Ethnographic research on villages provides further insights toward interpretation of ancient rural life and economy (Watson; Kramer, 1982; Horne; Goodell; Ehlers).

Ancient trade is difficult to document fully. Perishable commodities, such as textiles, have simply disappeared. Some workshops and craft or production areas have been identified through surface survey or excavation (Alden, 1979, 1982a-b; Caldwell; Caldwell and Shamirzadi; Miroschedji, 1976; Nicholas; Pigott, 1989c; Salvatori and Vidale). Most commodities were traded as raw or semi-processed materials rather than finished products (Carter, 1990; Tosi, 1974a-b). In Mesopotamia imported materials were worked and finished locally (Moorey, 1985; Carter, 1990; Potts). Studies of technology and sourcing of materials have yielded insights into production and trade (Berman, 1987, 1989; Blackman and Henrickson; Bulgarelli; Buson and Vidale; R. Henrickson, 1986, 1989, 1991; Heskell and Lamberg-Karlovsky; Kohl, 1975a-b; Majidzadeh, 1979; Shahmirzadi, 1979a-b; Pigott 1989a; Pigott et al. 1982; Rosenberg 1989; Tallon; Tosi 1974a-b, 1989; Tosi and Piperno 1973, 1975; Vandiver).

Even in the nominally historical periods from the third millennium B.C.E. onward, most of Persia remained non-literate, except the Elamite southwest and south, which have yielded contemporary documents (Meriggi; Stolper, 1976, 1984a-b, 1985; Scheil; Herrero; Yusifov). Contemporary Mesopotamian epigraphic sources contain limited information on the adjacent Persian highlands and lowlands (Algaze; Potts; Larsen; Stolper; Carter, 1990; Grayson 1972, 1976).

This article concentrates on the Bronze Age economy (see also [ARCHAEOLOGY i](#); [CHALCOLITHIC](#); [BRONZE AGE](#); [CERAMICS](#); [BRONZE](#); and [BRONZES OF LURISTAN](#)).

Paleolithic-Mesolithic. During the Paleolithic, small bands hunted and gathered



in the highland regions of Persia (Smith; Rosenberg, 1988). Material culture remains consist primarily of chipped stone, worked bone, and camp sites. The latest stage, sometimes called the “Mesolithic” or “Epi-paleolithic,” saw the first steps toward domestication of animals and plants facilitated by amelioration of the climate (Hesse; Pullar, 1977, 1990, Bökönyi, McDonald).

Neolithic (ca. 10,000-5500 B.C.E). The Zagros mountains and piedmont were a primary area where the domestication of plants and animals and the development of sedentary village life occurred following the last Ice Age (McDonald; Pullar, 1977, 1990; Voigt, 1983, 1987; Hole et al., 1969; Hole, 1974, 1977). The resulting mixed agricultural-pastoral Neolithic subsistence economy was the foundation for all later societal and economic developments, and remains the basis of southwest Asian life (Zeder; Miller).

Neolithic settlements were small and sparse (Hole, 1987a-b; Levine and McDonald; McDonald; Pullar, 1977, 1990; Shahmirzadi, 1977). Crafts such as pottery making, textiles, and basketry were developed (Vandiver; Voigt, 1983; McDonald; Hole et al., 1969). Small-scale long distance trade in raw materials included obsidian, which traveled from present-day Turkey and the Caucasus as far as southern Persia (Blackman, 1984 and personal communication).

Chalcolithic (ca. 5500-3500 B.C.E). During the Chalcolithic era profound socioeconomic, political, and cultural changes built on the Neolithic foundation. Numbers of villages peaked during the Middle Chalcolithic, followed by a sharp decrease in the Late Chalcolithic in most highland and lowland areas (E. Henrickson, 1985, 1991, 1994; Hole 1987a-b; Sumner, 1988; Vanden Berghe, 1987). Settlement hierarchies then began to develop in many regions, with a few larger villages growing among more smaller ones (Beale; Prickett; Vitali, Vitali, and Lamberg-Karlovsky; E. Henrickson 1994). The trend was most pronounced in the southwest lowlands (Hole, 1987a-b; Wright, 1987; Wright et al.). The construction of the massive “Haute Terrasse” at Susa (Canal; Steve and Gasche) and the nearby mortuary structure containing 1000-2000 burials represents early monumental architecture and the emergence of a regional ceremonial center. Such small polities probably had a population with some differentiation in status, power, and perhaps wealth (Pollock, 1989; Hole, 1990).

Settlement patterns suggest widespread use of irrigation (Hole, 1987a-b). Specialized nomadic pastoralism, divorced from settled village farming, became important in the Zagros highlands in the Late Chalcolithic (E.



Henrickson, 1985; Gilbert, 1983; Zagarell). Painted pottery, most made in households or by part-time potters, exhibits considerable regional diversity and includes some very fine wares, such as Middle Chalcolithic Bakun and Late Chalcolithic Susa A, which may have been made by specialist potters (Alizadeh; Pollock, 1983; Berman, 1987, 1989). Direct evidence is available for only a few other crafts, including stoneworking (glyptic; Amiet, 1972; E. Henrickson, 1988) and metal smelting and working (Caldwell; Caldwell and Shahmirzadi; Pigott, 1989b; Majidzadeh, 1979; Shahmirzadi, 1979a-b). Copper and obsidian are among the most obvious items of long distance trade (Blackman; Hole, 1987b; Pigott, 1989b).

Proto-Elamite (Susa II-III = Late Uruk-Jemdet Nasr-Early Dynastic I, ca. 3500-2800 B.C.E.). During the Late Uruk period (ca. 3500-3100 B.C.E.), cities in southern Mesopotamia established a farflung network of settlements and trading centers, reaching far into the mountains to the north and east (Algaze). The material culture of Susiana became heavily Mesopotamian (Susa II; Le Brun, 1978a-b; Carter, 1984; Amiet, 1986), and isolated “trading posts” were established, such as Gowdīn V at Gowdīn Tappa (Weiss and Young), although direct evidence for the types of commodities traded is minimal (Carter, 1990; Algaze). Early states emerged in the Susiana lowlands and southern Mesopotamia (Johnson, 1973; 1987; Wright et al., 1975, 1980).

At the end of the fourth millennium B.C.E. and extending into the Bronze Age, a shared cultural complex, the “Proto-Elamite horizon,” linked sites across much of Persia (Dyson and Voigt, 1989; Amiet, 1986). Proto-Elamite pottery has parallels with Jemdet Nasr and Early Dynastic I in Mesopotamia (ca. 3100-2800 B.C.E.; Carter, 1984; Voigt and Dyson, 1992). The Proto-Elamite (Susa III) period, and prior Late Uruk (Susa II) of lowland Mesopotamia, marked the development of long distance trade networks, the first cities and states, and writing (Le Brun and Vallat; Alden, 1987). Although a small center (ca. 11 ha.) at this time, Susa seems to have had contact or influence across the plateau (Dyson and Voigt; Dyson, 1987), reaching northeast to Tappa Ḥeṣār (Tepe Hissar) in Dāmḡān (Dyson and Howard; Dyson, 1987) and Tappa Sīalk in Kāṣān (Ghirshman), east to Šahr-e Sūḡta in Sīstān (Tosi, 1983; Tucci), and south to Banesh period Tappa Malīān in Fārs (Sumner, 1986; Nicholas; Alden, 1979, 1982a-b, 1987), Tappa Yaḡyā IVC in Kermān (Lamberg-Karlovsky 1970; Lamberg-Karlovsky and Tosi), and even the Mosul area of northern Iraq (Bachelot). Evidence for this long-distance cultural and economic network includes Proto-Elamite tablets, cylinder seals, seal-impressed artifacts and



sealings, and distinctive pottery types (Meriggi; Stolper, 1976, 1985; Dyson, 1987; Dyson and Voigt). The development of writing can be traced at Susa (Le Brun and Vallat).

A wide range of types of regional socioeconomic organization are known. In northern Susiana, Tappa Farrokābād was a small settlement (Wright, 1981). In Fārs, Banesh period Malīān was a city with a wall enclosing 150 ha, much of it open space, but the surrounding regional settlement shifted from sedentary village farming to an emphasis on pastoral nomadism (Sumner, 1985, 1986); several small settlements mass-produced specific types of ceramic vessels for regional distribution (Alden, 1982b). In Kermān, Yaḥyā IVC was an isolated small town (Vitali, Vitali and Lamberg-Karlovsky). Central and northern Zagros settlement consisted primarily of villages (Goff, 1971; E. Henrickson, 1994).

Bronze Age (Susa IV = Early Dynastic II-Old Babylonian, ca. 3000-1350 B.C.E.). Socioeconomic and political organization was highly variable across Persia, with a pronounced division between the east and west. Local centers, some large and urban with socioeconomically differentiated populations, were prominent in the north (Tureng Tepe [Deshayes, 1977] and Tappa Ḥeṣār [Dyson and Howard; Schmidt]), east (Šahr-e Sūkta; Tosi, 1976; Tosi and Piperno, 1975; Tucci), south (Kaftarī period Malīān; Sumner, 1989), and southwest (Susa; Steve and Gasche; Steve, Gasche, and Meyer; Carter 1971, 1980, 1984; Carter and Stolper). As one of the capitals of Elam, Susa was a large city; second millennium texts from Susa, mostly private legal documents, provide detailed data on land tenure and agriculture (Scheil; Meyer; Stolper, 1984a).

Small interrelated polities characterized highland western Persia (Carter, 1984, 1987; Schacht, 1987; Haerinck, 1987; R. Henrickson, 1984). In the larger inner Zagros valleys, settlement systems consisted of relatively large sites, such as Gowdīn Tappa (Godin Tepe) at about 15 ha, in the center of larger valleys surrounded by villages (Goff, 1971). In contrast, the smaller and drier outer Zagros valleys and piedmont of Lurestan had a strongly nomadic pastoral economy, with a paucity of settlements and isolated cemeteries apparently not associated with nearby settlements (Carter, 1987; Goff, 1971).

“Industrial” areas within large settlements, or entire small settlements, were devoted to specialized crafts: copper smelting and/or “bronze” artifact production (Šahr-e Sūkta, Tappa Ḥeṣār; Tosi, 1976; Tosi and Piperno, 1975;



Gowdīn IV [Godin Project archives]); pottery making (Šahr-e Sūkta [Buson and Vidale], Tappa Ḥeṣār [Tosi, 1989]), and lapis lazuli and other semiprecious stone bead production (Tappa Ḥeṣār [Bulgarelli; Tosi, 1989; Rosenberg, 1989]; Šahr-e Sūkta [Tosi and Piperno, 1973]; Šahdād [Salvatori and Vidale]); stone vessels (Šahr-e Sūkta; Ciarla); bitumen and bitumen vessels (Kantor; Marschner and Wright); and carved chlorite vessels (Tappa Yaḥyā; Kohl, 1975a-b; Lamberg-Karlovsky, 1988). Chlorite vessels carved in the “Intercultural Style” were traded to lowland Mesopotamia (Kohl, 1978; Miroschedji, 1973). Copper came from Magan and later Dilmun through the Persian Gulf (Tallon). Tin reached Mesopotamia through Susa and probably also through some route(s) through the central or northern Zagros to Assur (Larsen; Cleziou and Berthoud; Tallon). The Habur ware assemblage at Dīnkā Tappa (Ḥasanlū VI) in northwestern Persia reflects strong contact with northern Mesopotamia in the early second millennium (Hamlin). The increasing sophisticated craft techniques of specialist artisans whose work areas have not been found can sometimes be reconstructed from the artifacts they produced (R. Henrickson, 1986, 1991, 1992; Blackman and Henrickson; Buson and Vidale; Piperno).

Iron Age I-II (ca. 1350-800 B.C.E.). The transition from late Bronze Age to early Iron Age in the later second millennium B.C.E. remains obscure, particularly in western Persia, in an era of economic decline and major cultural discontinuities accompanied by probable ethnic movements (Young, 1965, 1985; Dyson 1965, 1973; Levine, 1987). Elam remained a major power (Stolper, 1984a-b; Carter, 1984). Few pre-Median Iron Age sites have been excavated in western Persia; Zagros highland settlement tended to consist of scattered citadels and villages (e.g., Ḥasanlū IVB [Dyson and Voigt; Dyson, 1989; Dyson and Muscarella], Bābā Jān III [Goff, 1977, 1978; Goff Meade]). Sedentary population apparently declined. Much data comes from cemeteries (e.g., Dīnkā Tappa [Muscarella, 1974], Mārlik [Neghaban, 1964, 1977, 1983], Luristan [Vanden Berghe, 1979; Vanden Berghe and Haerinck, 1981, 1987]). Highland western Persia became the target of repeated Assyrian campaigns; lists of booty and tribute hint at possible Iranian products and resources (Grayson, 1972, 1976). Ḥasanlū IVB, destroyed about 800 B.C.E., provides evidence of artistic contacts with northern Mesopotamia (Winter, 1977, 1980, 1989; Schauensee, 1988; Marcus, 1988, 1989; Muscarella, 1974, 1980, 1989). Lurestan, particularly the outer western portion, again seems to have supported predominantly nomadic pastoralists. Early in the first millennium B.C.E., the distinctive Luristan bronze tradition emerges (Curtis; Muscarella, 1989).



Ironically, ironworking does not become common until well into the Iron Age (Iron II, ca. 1000-800 B.C.E.; Pigott, 1977, 1980, 1989c).

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